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THE SURFACE AREA OF FIBROUS  
FILTERS.

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ABSTRACT

Among the parameters controlling the filtration properties and draw resistance of cigarette filters, the surface area of the fibrous medium is quite important. In the past, it has been difficult to accurately measure this quantity because of the relatively small surface involved. With the extension of the Brunauer, Emmett and Teller gas adsorption technique to low specific surface area materials by the use of Krypton gas, such measurements have become practical. Using this technique, a variety of cellulose acetate filters have been examined, and the fiber surface area correlated with other filtration parameters. The effect of fiber size, as indicated by denier per filament, fiber cross section, and bonding agents on the specific surface of the acetate filtering media are presented and discussed. For comparative purposes, data on the surface area of tobacco and paper are also presented.

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